



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,098	01/31/2002	Fabio Casati	10010118-1	6026

7590 08/22/2007  
HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

NASH, LASHANYA RENEE

ART UNIT	PAPER NUMBER
----------	--------------

2153

MAIL DATE	DELIVERY MODE
-----------	---------------

08/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/066,098  
Filing Date: January 31, 2002  
Appellant(s): CASATI ET AL.

**MAILED**

**AUG 22 2007**

**Technology Center 2100**

---

Dan C. Hu  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 07 May 2007 appealing from the Office action mailed 7 December 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The Examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

2003/0140119	Acharya et al.	07-2003
6,931,574	Coupal et al.	08-2005

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acharya et al. (US Patent Application Publication 2003/0140119), in view of Coupal et al. (US Patent 6,931,574), hereinafter referred to as Acharya and Coupal respectively.**

In reference to claim 1, Acharya discloses a method for dynamic service discovery wherein conversation logic (i.e. protocol) for transmitting a workflow is selected dynamically (abstract). Acharya discloses:

- A method (Figures 5-6) for selecting a conversation logic (i.e. protocol) at run-time for a workflow definition that includes at least one node with no hard-coded conversation logic, (paragraphs [0017]-[0018]) the method comprising the steps of:

- When executing the node with no hard-coded conversation logic, dynamically discovering a service associated with the node with no hard-coded conversation logic (i.e. dynamic service discovery; paragraphs [0028]-[0036]);
- Determining a corresponding conversation logic based on the discovered service, (paragraph [0037]); and
- Dynamically plugging in the determined conversation logic into the node at run time (i.e. formatting response; paragraphs [0031]-[0034]).

Although Acharya discloses substantial features of the claimed invention, the reference fails to expressly show maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition. Nonetheless, maintaining conversation logic repositories were well known in the art at the time of invention, as further evidenced by Coupal. Therefore, it would have been obvious for one of ordinary skill in the art to accordingly modify the aforementioned method as disclosed by Acharya.

In an analogous art, Coupal discloses a method for analyzing and interpreting conversation logic (i.e. protocol) in network communications (abstract). Coupal further discloses maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition (i.e. protocol database; Figure 1-item 34; column 8, line 15 to column 9, line 35). These modifications to the method as disclosed by Acharya would have been obvious because one of ordinary skill in the art would have been motivated to save conversation logic within the database for

efficient accessing and analyzing of various definition files, (Coupal; column 3, lines 55-67; column 4, lines 41-50).

In reference to claim 3, Acharya discloses a method for dynamic service discovery wherein conversation logic (i.e. protocol) for transmitting a workflow is selected dynamically (abstract). Acharya discloses:

- A method (Figures 5-6) for selecting a conversation logic (i.e. protocol) at run-time (paragraphs [0017]-[0018]), comprising the steps of:
- At run-time, sending a service selection query (i.e. service query) to an electronic services platform or other service broker (i.e. service discovery proxy), (paragraphs [0028]-[0033]);
- Receiving a returned service identifier or reference (i.e. response; paragraphs [0028]-[0033]); and
- Selecting conversation logic from the repository of conversation logics based on a returned service identifier, (paragraphs [0037]-[0038]).

Although Acharya discloses substantial features of the claimed inventions, the references fail to expressly show maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition.

Nonetheless, maintaining conversation logic repositories were well known in the art at the time of invention, as further evidenced by Coupal. Therefore, it would have been obvious for one of ordinary skill in the art to accordingly modify the aforementioned method as disclosed by Acharya.

In an analogous art, Coupal discloses a method for analyzing and interpreting conversation logic (i.e. protocol) in network communications (abstract). Coupal further discloses maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition (i.e. protocol database; Figure 1-item 34; column 8, line 15 to column 9, line 35). These modifications to the method as disclosed by Acharya would have been obvious because one of ordinary skill in the art would have been motivated to save conversation logic within the database for efficient accessing and analyzing of various definition files, (Coupal; column 3, lines 55-67; column 4, lines 41-50).

In reference to claim 11, Acharya discloses a system for dynamic service discovery wherein conversation logic (i.e. protocol) for transmitting a workflow is selected dynamically (abstract). Acharya discloses:

- A system (Figure 7) for dynamically selecting a conversation logic at run-time for a workflow definition that includes at least one node with no hard-coded conversation logic (paragraphs [0017]-[0018]), comprising:
- A workflow engine for processing workflow definitions (i.e. processing module; Figure 7-item 730; paragraphs [0028]-[0033]); and
- A dynamic conversation logic selection mechanism (i.e. service detector module; Figure 7-item 720) for receiving a service identifier that is associated with a service at run-time and based thereon for selecting a conversation logic for interacting with the service at run-time, (paragraphs [0034]-[0038]).

Art Unit: 2153

Although Acharya discloses substantial features of the claimed invention, the reference fails to expressly show maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition. Nonetheless, maintaining conversation logic repositories were well known in the art at the time of invention, as further evidenced by Coupal. Therefore, it would have been obvious for one of ordinary skill in the art to accordingly modify the aforementioned method as disclosed by Acharya.

In an analogous art, Coupal discloses a method for analyzing and interpreting conversation logic (i.e. protocol) in network communications (abstract). Coupal further discloses maintaining a conversation logic repository that includes at least one conversation logic that is external to the workflow definition (i.e. protocol database; Figure 1-item 34; column 8, line 15 to column 9, line 35). These modifications to the method as disclosed by Acharya would have been obvious because one of ordinary skill in the art would have been motivated to save conversation logic within the database for efficient accessing and analyzing of various definition files, (Coupal; column 3, lines 55-67; column 4, lines 41-50).

In reference to claim 2, Acharya shows the method wherein the step of when executing the node with no hard-coded conversation logic, dynamically discovering a service associated with the node with no hard-coded conversation logic includes the steps of: determining a service based on a service selection rule (i.e. service discovery based on registry; paragraphs [0028]-[0030]); receiving a service reference (i.e. response;



Art Unit: 2153

paragraphs [0032]-[0034]); and wherein the step of determining a corresponding conversation logic in the conversation logic repository based the discovered service further includes the steps of using the service reference to determine a conversation logic for the determined service, (paragraphs [0035]-0039)).

In reference to claims 4 and 15, Coupal shows the wherein each conversation logic is associated with at least one service, (Figure 4-item 60)

In reference to claims 5 and 16, Coupal shows the method wherein the conversation logic is for the exclusive use of a given composite service, (column 10, line 20-column 11, line 31)

In reference to claims 6 and 17, Coupal shows the method wherein the conversation logics is shared by two or more composite services (Figure 4-item 60).

In reference to claims 7 and 18, Coupal shows the method wherein the conversation logic is not defined in the workflow at process definition time (i.e. protocol definition file does not already exists; column 10, line 20-column 11, line 31).

In reference to claim 8, Acharya shows the method further comprising the step of: interacting with a dynamic service discovery mechanism (i.e. service detector module; Figure 7-item 720); and dynamically discovering services, (paragraphs [0035]-[0038]).

In reference to claims 9 and 19, Acharya shows the method further comprising the step of: performing late binding of the conversation logic at run-time, (i.e. dynamic; paragraphs [0031]-[0034]).

In reference to claims 10 and 20, Coupal shows the method wherein the repository is one of a single central database and multiple distributed files, (Figure 1-item 34; column 8, line 40-column 9, line 13).

In reference to claim 12, Acharya shows the system further comprising: d) a source for services; wherein the source discovers services based on a service selection rule; wherein the dynamic conversation logic selection mechanism (DCLSM) selects appropriate conversation logic from the conversation logic repository based on a discovered service, (paragraphs [0028]-[0037]).

In reference to claim 13, Acharya shows the system wherein the source for services is one of a service broker (i.e. service discovery proxy), a service marketplace, an e-services platform, a company, and an entity, (paragraphs [0028]-[0033]).

In reference to claim 14, Coupal shows the system wherein only services that have a conversation protocol compatible with one of the conversation logics available in the

Art Unit: 2153

repository are selected, (i.e. protocol definition already exists; column 10, line 20-column 11, line 31).

In reference to claim 21, Coupal shows the conversion logic repository comprises plural conversation logic, and wherein determining the corresponding conversation logic comprises selecting one of the plural conversation logic based on the discovered service, (i.e. protocols selected based on definition constructs; column 12, line 38-column 13, line 42); and Acharya shows the at least one conversation logic comprises a specification of operations to be performed on the determined service (i.e. how to employ the service; paragraph [0038]).

In reference to claim 22, Coupal shows the conversation repository comprises plural conversation logic, and wherein selecting a conversion logic comprises selecting one of the plural conversation logic (i.e. protocols selected based on definition constructs; column 12, line 38-column 13, line 42); and Acharya shows the at least one conversation logic comprises a specification of operations to be performed on the determined service (i.e. how to employ the service; paragraph [0038]).

In reference to claim 23, Coupal shows the conversation logic repository includes plural conversation logic, and wherein the dynamic conversation logic selection mechanism selects one of the plural conversation logic that is associated with the service, (i.e. protocols selected based on definition constructs; column 12, line 38-column 13, line

42); and Acharya shows the at least one conversation logic comprises a specification of operations to be performed on the determined service (i.e. how to employ the service; paragraph [0038]).

In reference to claim 24, Acharya shows the at least one conversation logic comprises a specification of operations to be performed on the determined service (i.e. how to employ the service; paragraph [0038]).

In reference to claims 25-26, Acharya shows the at least on conversation logic comprises a specification of operations to be performed on a service identified by the returned service identifier (paragraphs [0031]-[0032]).

#### **(10) Response to Argument**

Appellant's arguments have been fully considered but they are not persuasive.

**(I) Appellant contends that selecting the appropriate communication protocol to use for communication with local devices is not the same as determining corresponding conversation logic, based on the discovered service.**

The Examiner respectfully disagrees. The specification provides no comprehensive definition for the tem "conversation logic". The Examiner asserts that in the context of the specification, the term "conversation logic" is described to be specifically applicable to a particular protocol for a service (page 8, lines 16-25).

Art Unit: 2153

Therefore, the Examiner considers the claimed conversation logic to be equivalent to a communications protocol for a service. Furthermore, Appellant asserts that Acharya discloses the protocol selection operation cited in paragraph [0037] has to be performed before the service discovery proxy can determine services of local devices, and therefore cannot teach determining a corresponding conversation logic based on the discovered services. Examiner respectfully disagrees. Examiner asserts that Acharya expressly the protocol selection operation being performed before the service discovery proxy can determine services of local devices. Referring specifically to paragraph [0037], Acharya discloses that the service discovery proxy supports a plurality of protocols and therefore determines an appropriate communication protocol to be used, paragraph [0037], lines 4-6. However, contrary to Appellant's assertion, Acharya expressly discloses that the step of "Determining appropriate communication protocol involves multicasting service discovery packets over a plurality of network media using a plurality of communication protocols and determining appropriate protocol by evaluating response to the multicast", paragraph [0037], lines 8-13. That is, the service discovery is initiated first (i.e. service discovery packets transmitted in a multicast) and the subsequent responses to the service discovery have to be evaluated in order to determine the communication protocol to be used. Therefore, it is evident that the service discovery is performed before the selection of the communication protocol. Moreover, Acharya clearly teaches that the selection is directly based on the discovered services.

**(II) Appellant contends that Acharya clearly does not teach or suggest dynamically plugging in the determined conversation logic into the node at run time.**

Examiner asserts that in the context of the specification, the term "plugging in" generally refers to dynamic execution as opposed to use of a predefined hard-code (i.e. workflow specification time, specification page 5, lines 4-16). Therefore, the Examiner considers the claimed "plugging-in" to be equivalent to being dynamically executed as part of a dynamic service discovery. Thus, Acharya discloses dynamically modifying the aforementioned service discovery response so as to provide the necessary information enabling the user to utilize the service when it is to be executed (i.e. run-time; paragraph [0031]). This modification to the response is dynamically executed (as opposed to hard-coded). It is executed as part of the service discovery. Thus meeting the claim limitation "dynamically plugging in the determined conversation logic into the node at run time

**(III) Appellant contends that the teachings of Acharya and Coupal are unrelated.**

The Examiner respectfully disagrees. To the extent that Appellant is contending that the reference cannot be combined because they are not analogous art, applicant is reminded that it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for

Art Unit: 2153

rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both Acharya and Coupal are directed to dynamically determining appropriate conversation logic (i.e. protocol) for network transmitted communications. Specifically, Acharya is regarding dynamic service discovery wherein conversation logic (i.e. protocol) is determined for transmitting a workflow (abstract). Similarly, Coupal is regarding analyzing and interpreting conversation logic (i.e. protocol) in network communications (abstract). These aforementioned teachings of Acharya and Coupal are clearly in the same field of endeavor as the instant invention. Moreover, the teachings of Acharya and Coupal are clearly related as they are both directed to determining appropriate protocols. Acharya discloses that content comprising the multicast packets undergo a form of analysis in order for the protocol of the service to be derived by the service discovery proxy. In order to support this analysis as disclosed in the Acharya reference, it is evidently relatable to consider the teachings of a protocol analyzer and protocol database as disclosed by Coupal. Accordingly, there is no basis for Appellant's assertion that there is no motivation to combine the teachings of Acharya and Coupal because these teachings are unrelated.

**(IV) Appellant contends that the Examiner has used impermissible hindsight reconstruction to piece together un-related elements of the prior art.**

The Examiner respectfully disagrees. While the Examiner concedes that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was

Art Unit: 2153

within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the Appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the conclusion of obviousness is not dependent on Appellant's disclosure, but is evident from the references themselves. Acharya discloses the consideration of various protocols associated with the service discovery process. Coupal teaches a known protocol analyzer and protocol database used in the art to analyze various protocols. It would have been obvious to one of ordinary skill in the art to use the protocol analyzer and protocol database taught by Coupal to consider the various protocols associated with the discovery process as disclosed by Acharya. Using the known protocol analyzer and protocol database provides a method for efficiently accessing and analyzing the protocols.

**(V) Appellant contends that Acharya does not suggest selecting a conversation logic based on a returned service identifier.**

The Examiner respectfully disagrees. As previously discussed in addressing (II), the Examiner asserts that the selection of the communication protocol is performed prior to the service discovery. It therefore logically follows that Acharya discloses that the selected communication protocol be determined based on a service identifier provided in the response to the service discovery. Specifically, Acharya discloses that the service query responses are generated (paragraphs [0037]-[0038]) to comprise "a list of services" and further containing information enabling the requester to utilize the



Art Unit: 2153

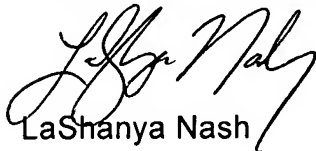
discovered services (paragraphs [0031]-[0032]). Examiner asserts it is implied if not inherent in the Acharya reference that the response must contain identifiers for each of the available services in order for the services to be listed. Furthermore the services must be identified in some manner in order for the requestor to utilize the appropriate service. As a result, it is clear that the references teach the elements of the claims as recited by Appellant.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the Examiner in the Related Appeals and Interferences section of this Examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
LaShanya Nash

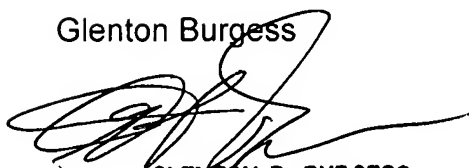
Art Unit 2153

Art Unit: 2153

Conferees:

/Lynne H Browne/  
Lynne H Browne  
Appeal Practice Specialist, TQAS  
Technology Center 2100

Glenton Burgess

A handwritten signature in black ink, appearing to read 'Glenton B. Burgess', with a long horizontal flourish extending to the right.

**GLENTON B. BURGESS**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**